



American Solar Challenge

North America's Newest, Most Challenging Solar Car Race

Richard J. King

U.S. Department of Energy

Raising the Bar

After ten years of racing solar cars in the U.S., we decided to raise the bar. The American Solar Challenge is the most challenging solar car race ever held.

Sunrayce

vs.

ASC

**Ten 100-150-mile
legs**

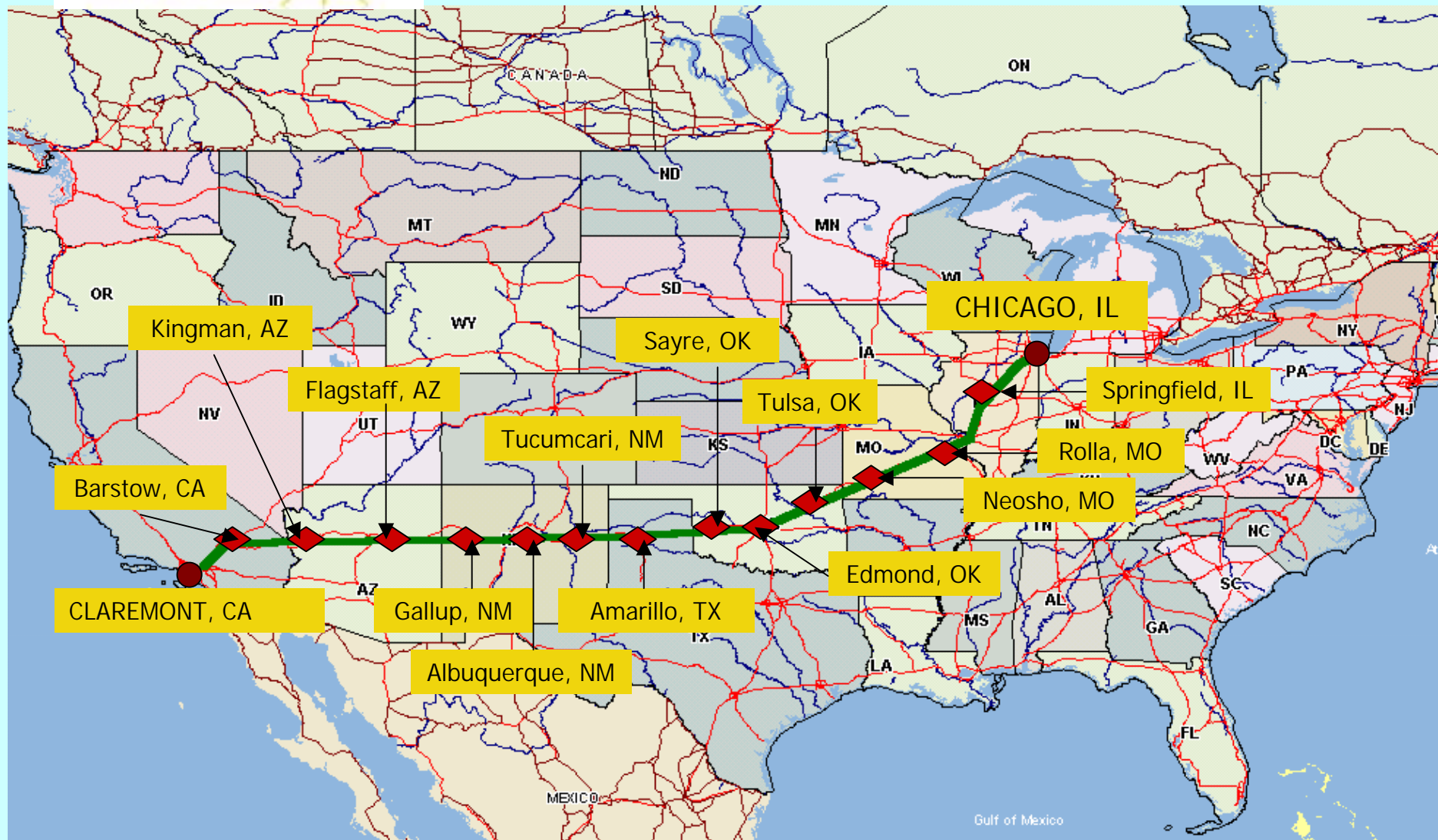
1200 miles Total

**Three legs, middle
leg 1,800 miles!**

2,300 miles Total



2300 MILES OF SOLAR RACING





Historic Route 66 Celebrated its Silver Jubilee Anniversary in 2001, which was begun in 1926 and quickly became known as “Main Street USA”.

Hayes

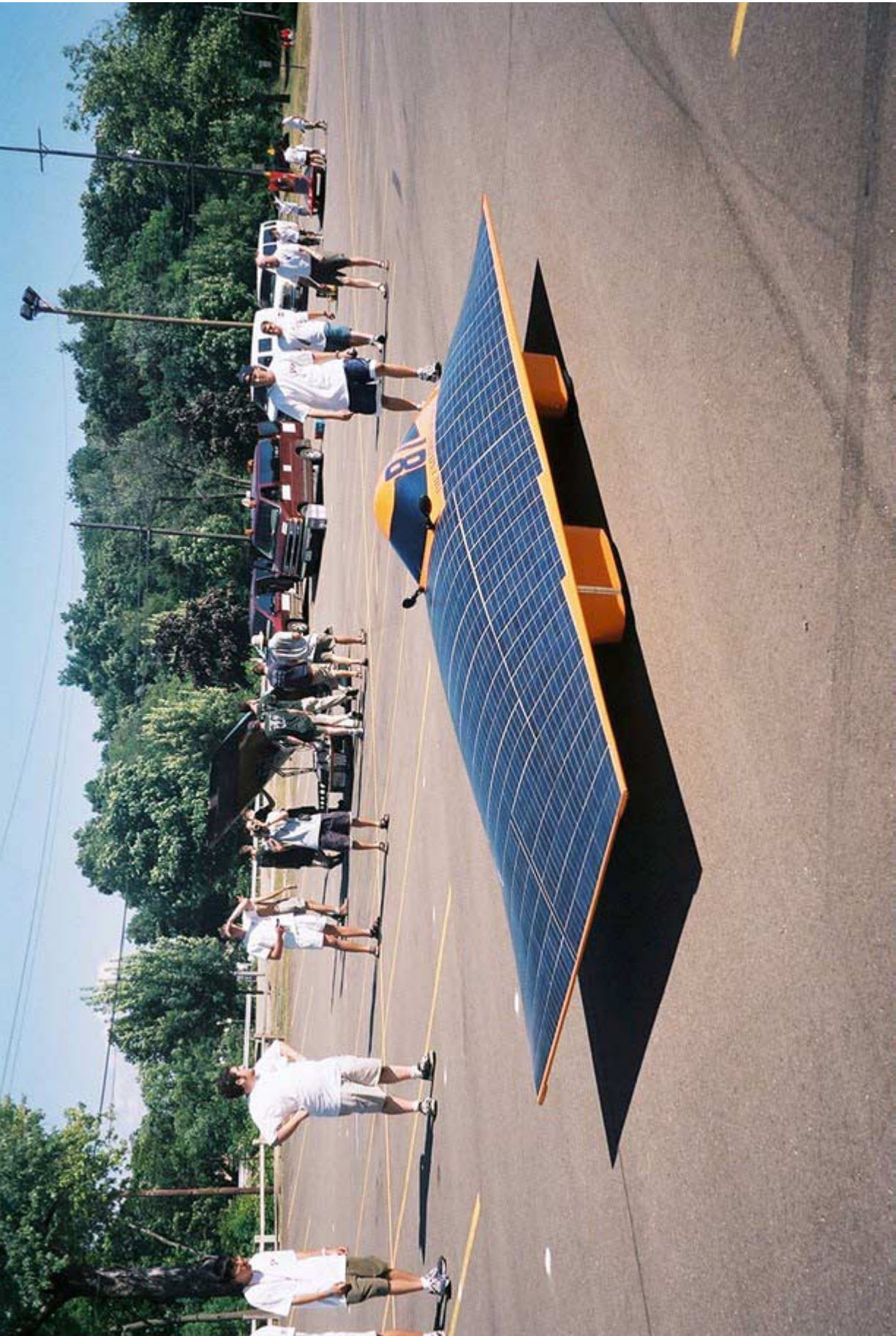
SH



ALAN BEN PINEAPPLE

ROUTE 66







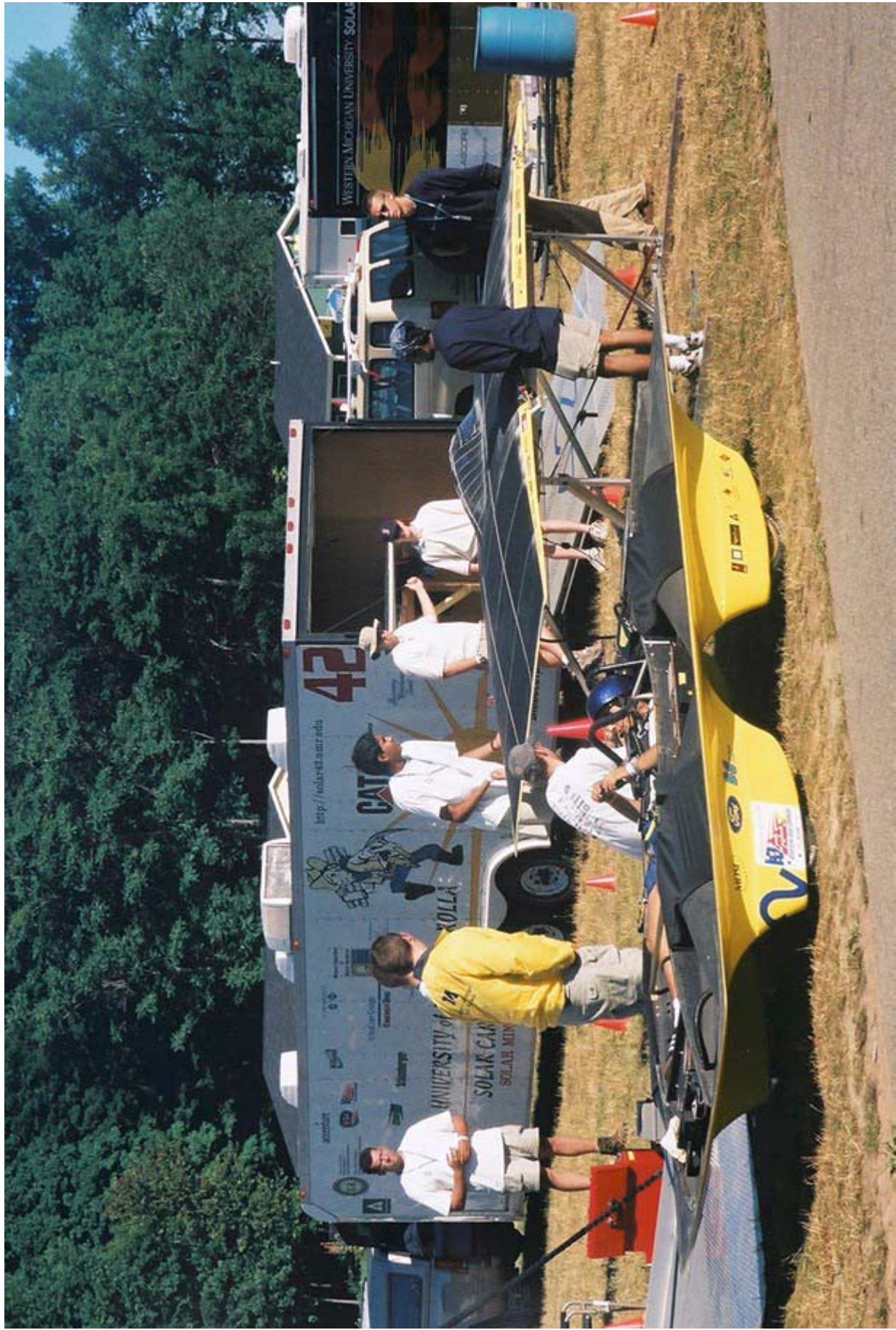


























PV Array Measured Power

<u>Team Name</u>	<u>Power (watts)</u>	<u>Cell Manufacturer</u>
1. Messiah College	1627	Emcore
2. Principia College	1528	TechStar
3. Queen's University	1084	SunPower Pegasus
4. University of Michigan	1038	Spectrolab
5. Kansas State University	992	ASE Americas
6. Texas A&M University	968	Spectrolab
7. Iowa State University	934	ASE Americas
8. MIT	890	ASE Americas
9. University of Waterloo	871	BP Solar
10. University of Toronto	864	SunPower Pegasus
11. University of Missouri – Rolla	862	ASE Americas
12. South Bank University	869	ASE Americas
13. Rose-Hulman	858	ASE Americas









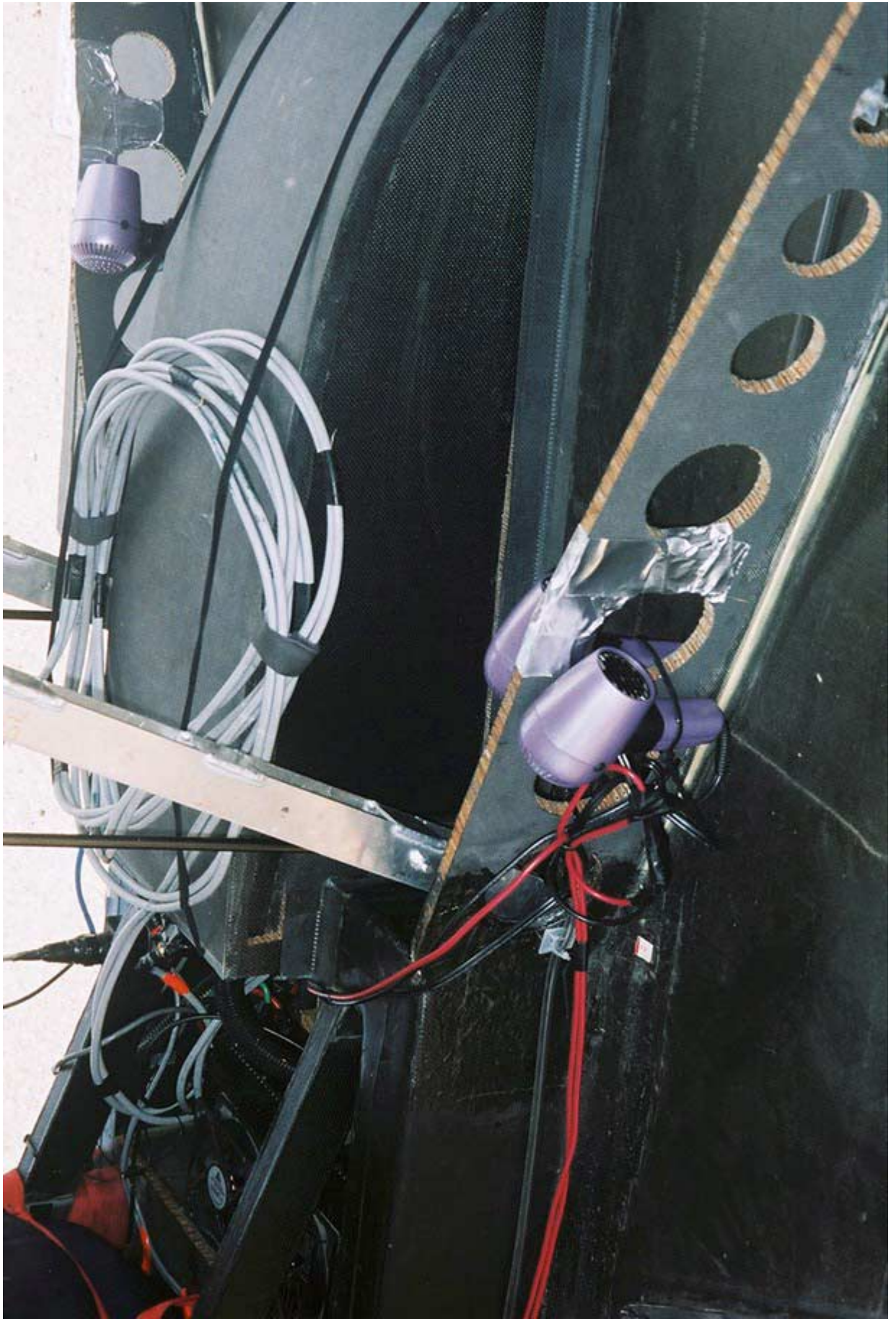


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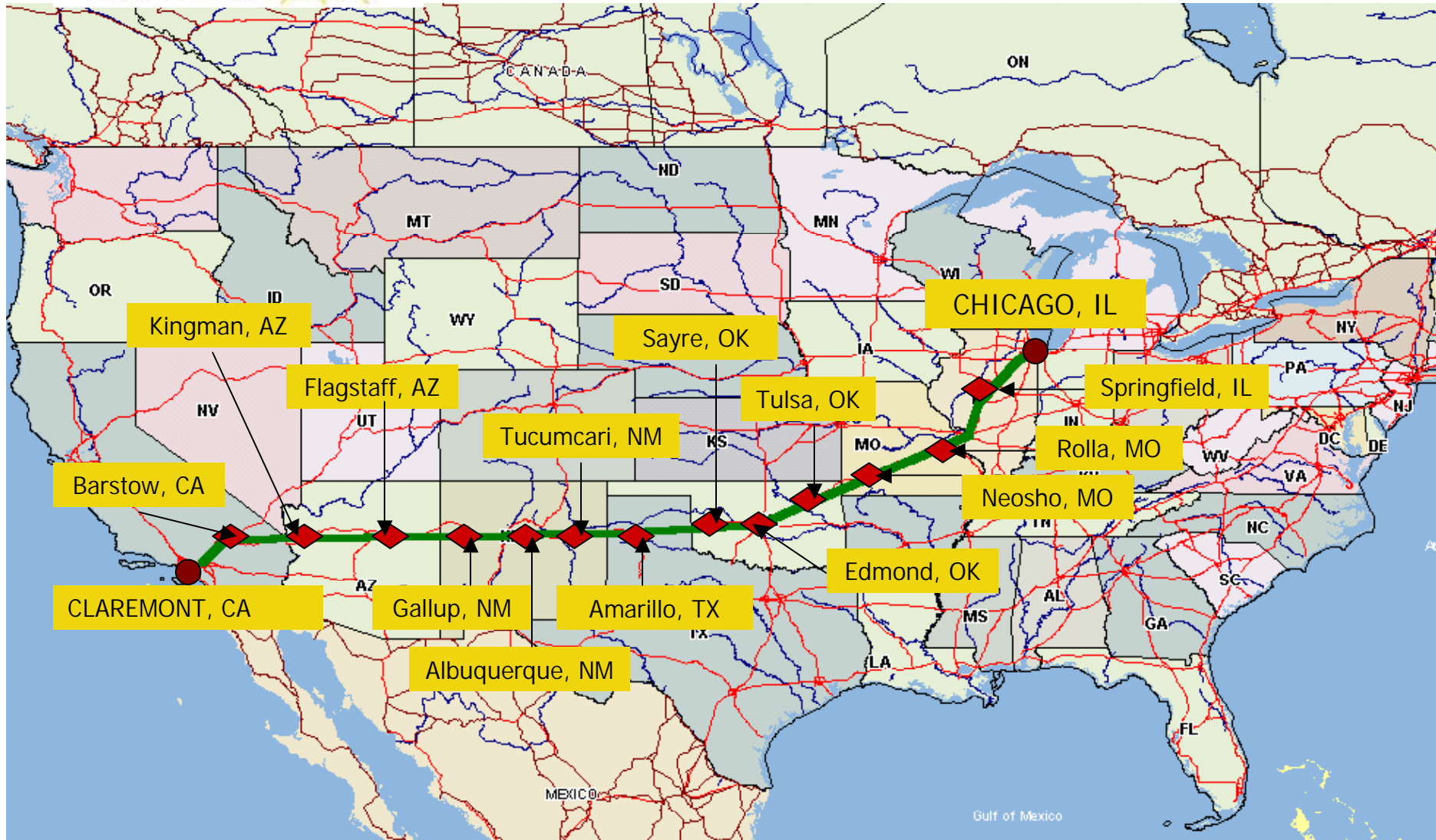


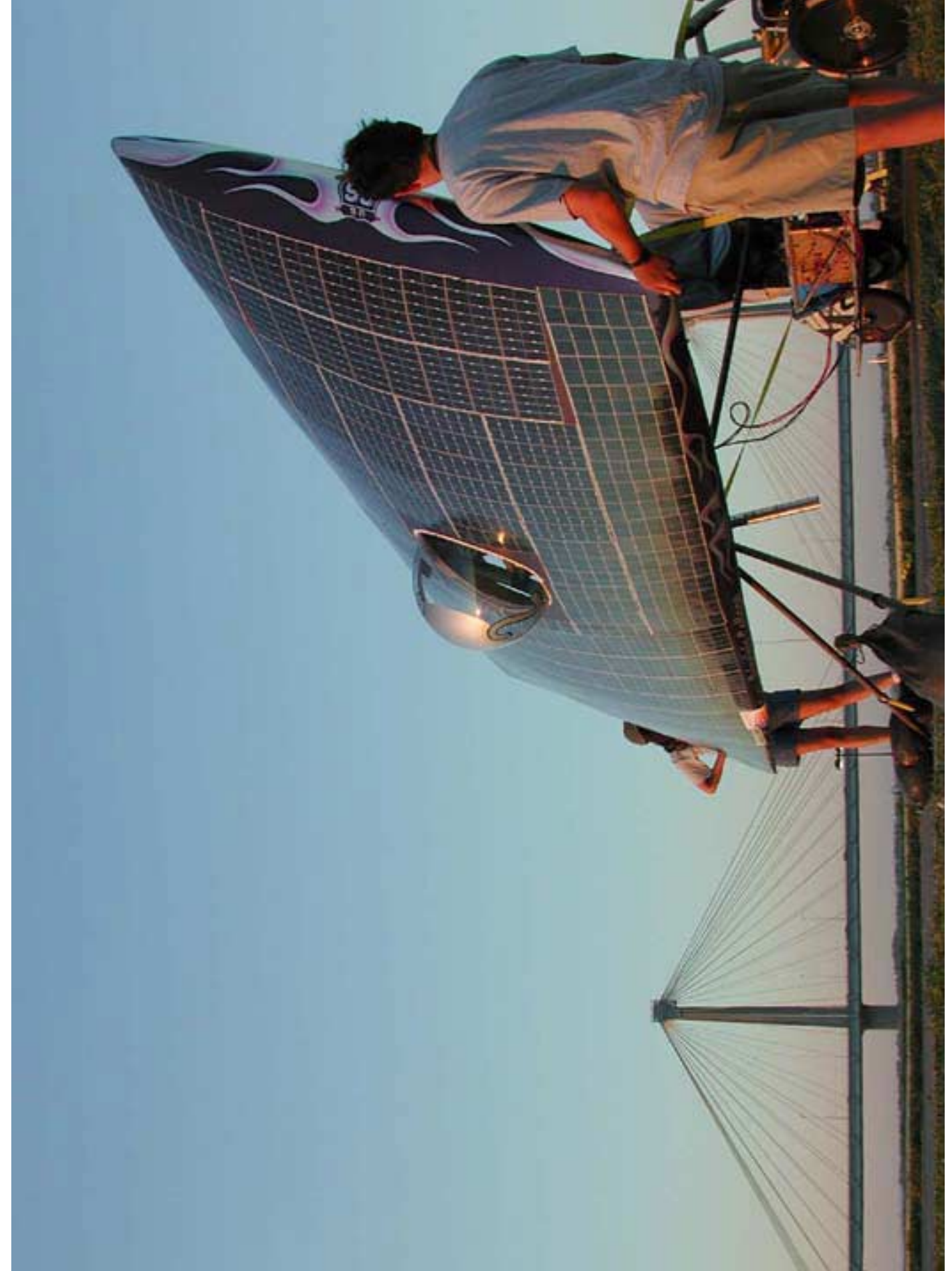
**Starting line at
Chicago**

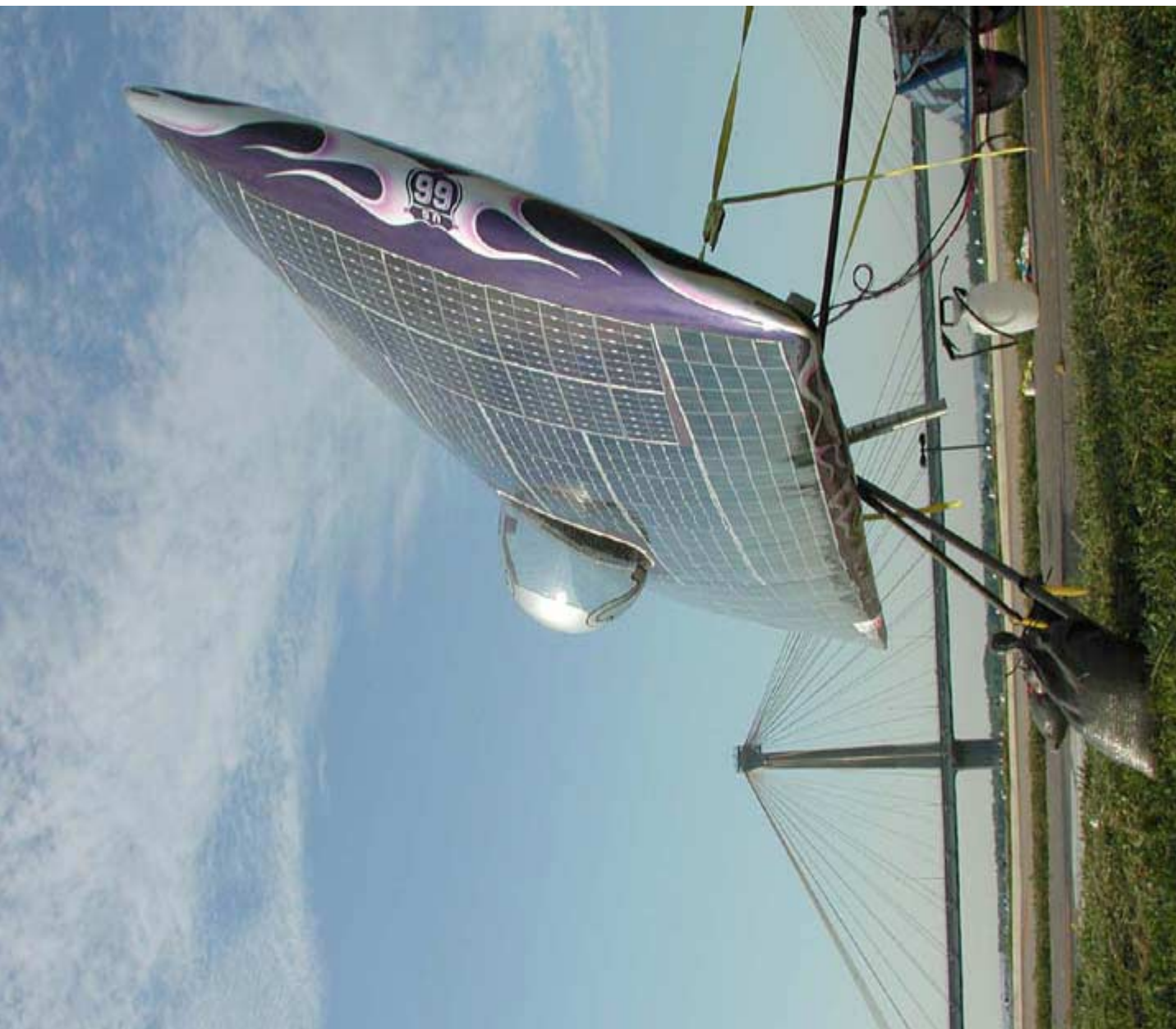




2300 MILES OF SOLAR RACING













First Overnight at UM- Rolla













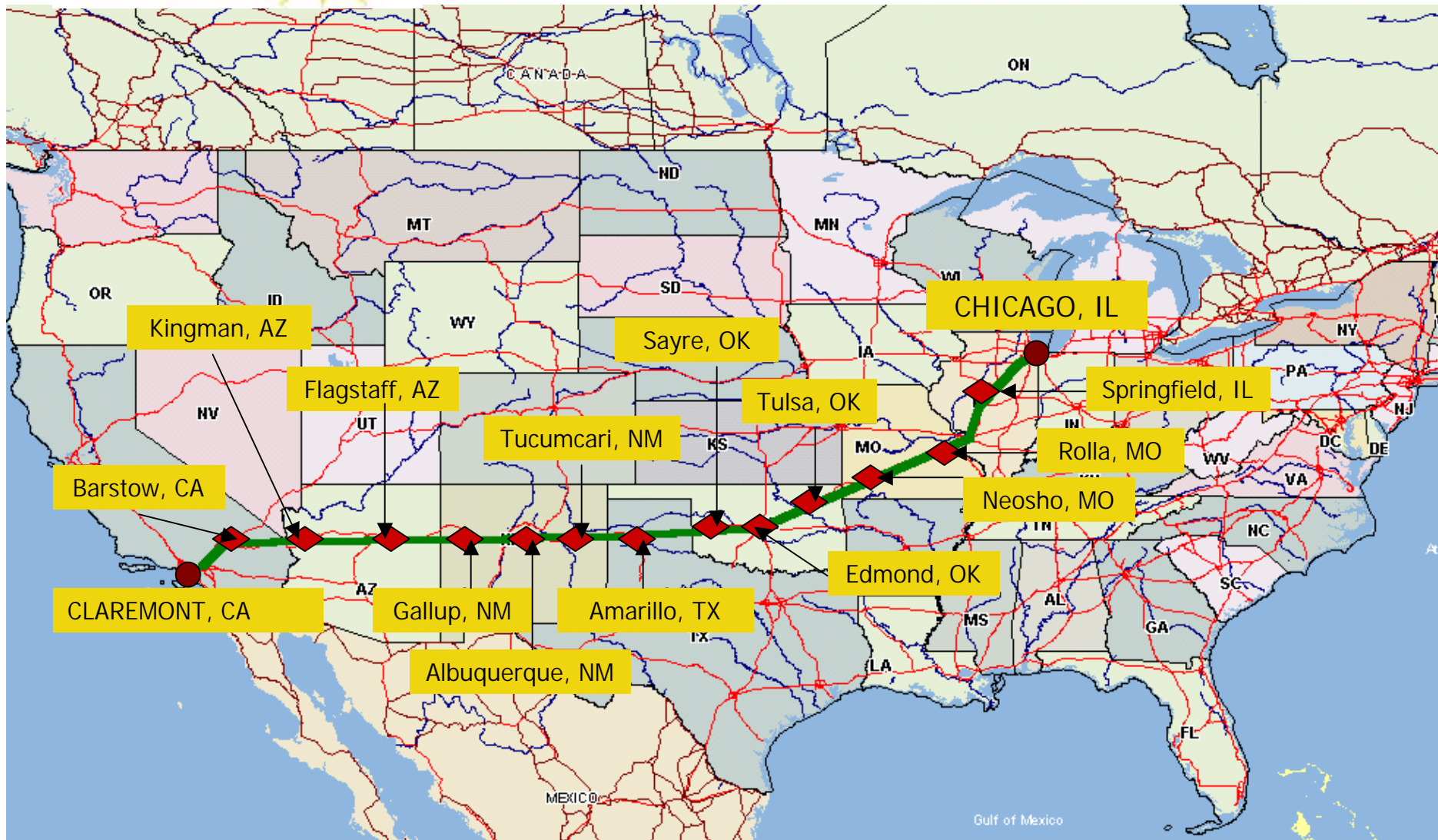








2300 MILES OF SOLAR RACING



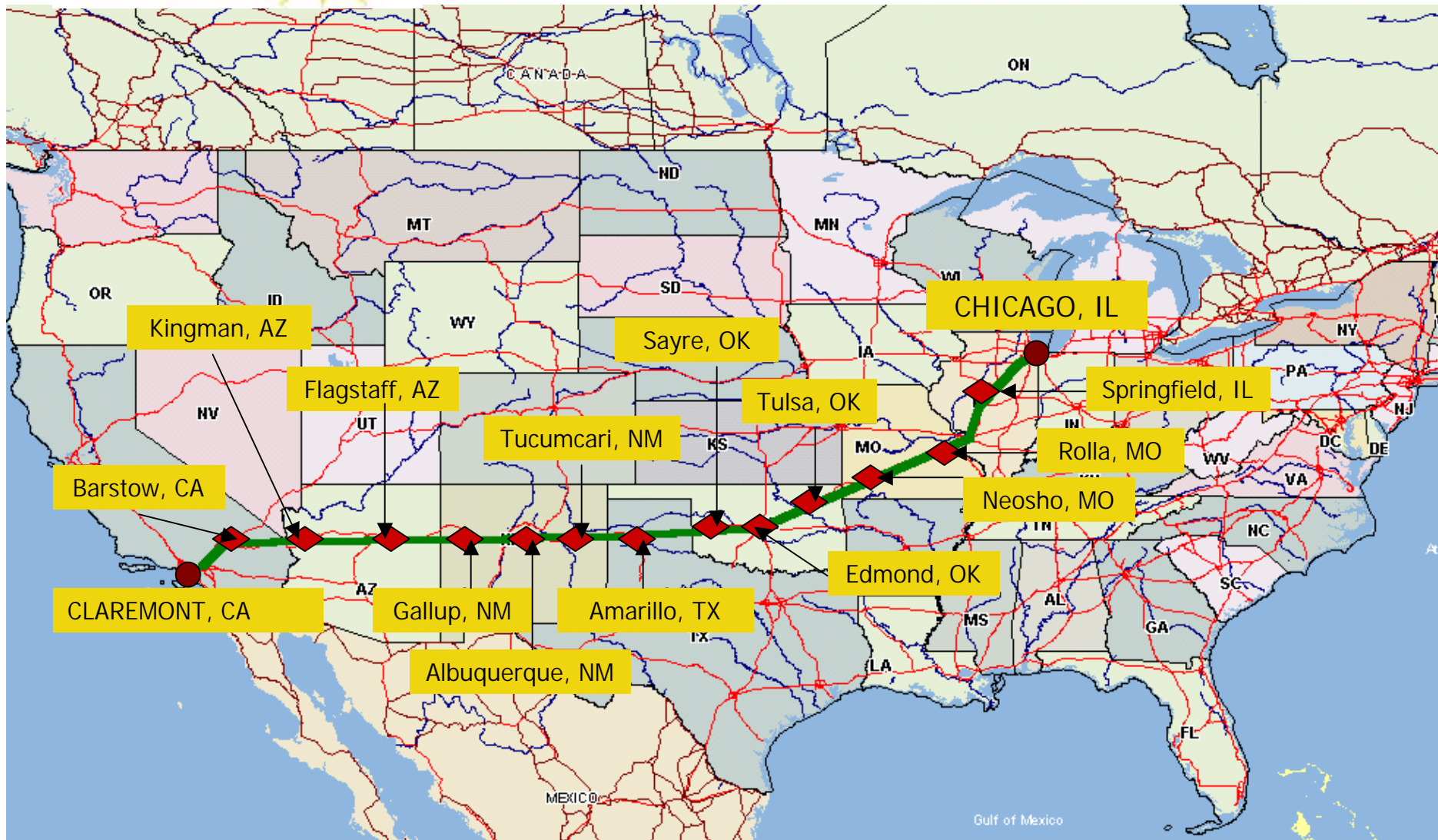








2300 MILES OF SOLAR RACING

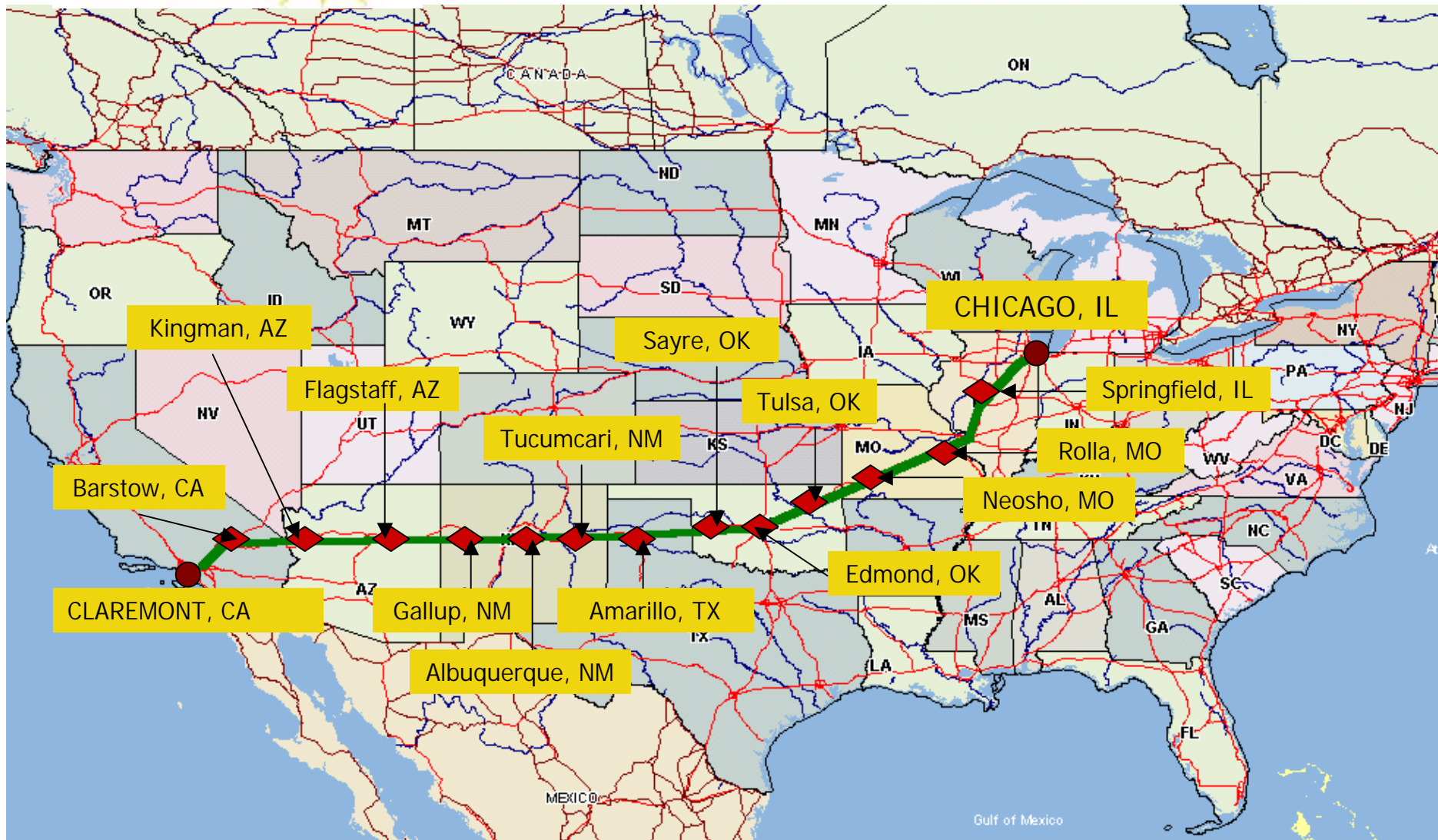








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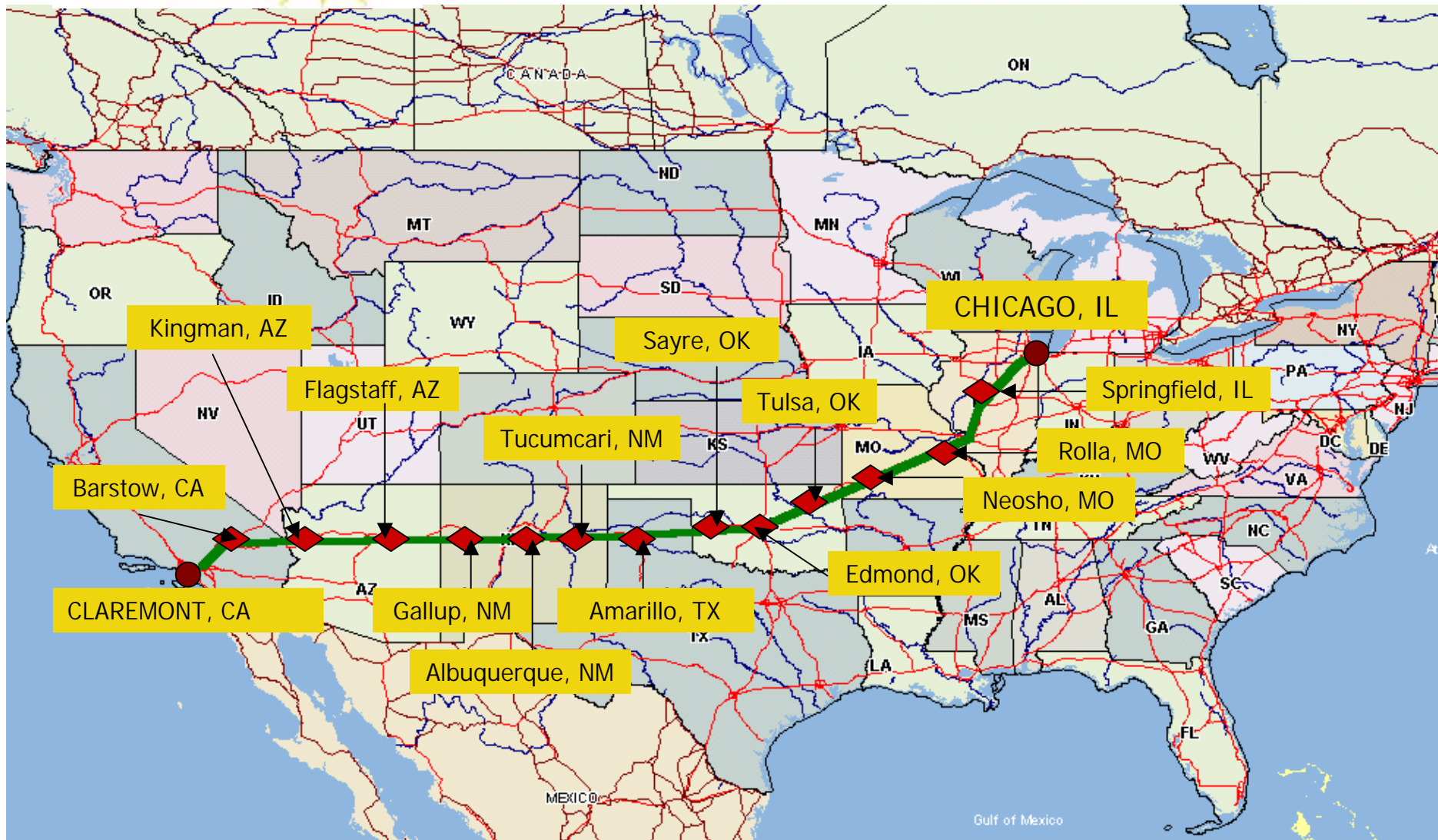








2300 MILES OF SOLAR RACING

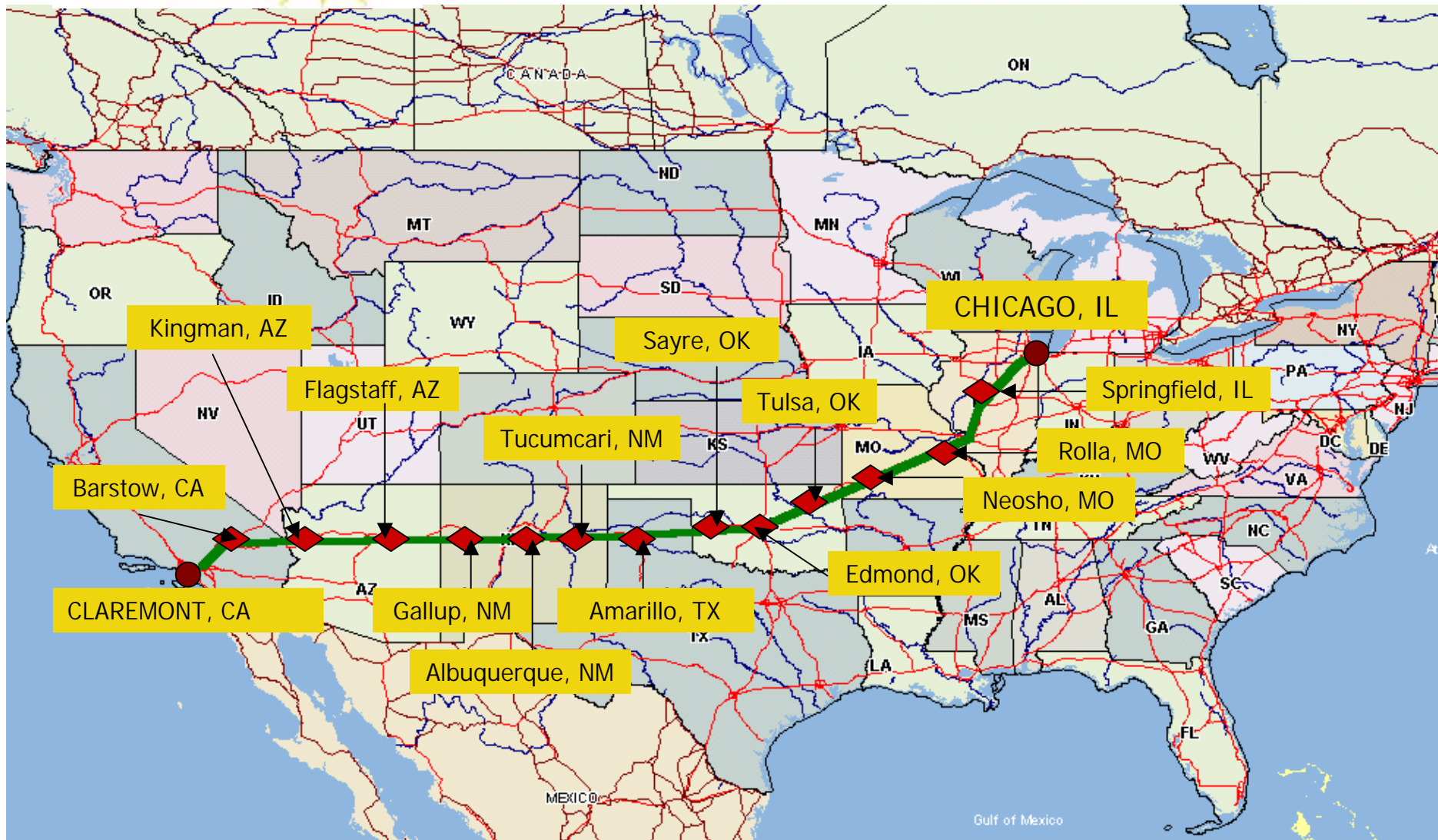








2300 MILES OF SOLAR RACING















































Final Results

		RANKING		
		<u>Start</u>	<u>Leg 2</u>	<u>Leg 3</u>
1. University of Michigan	56:10:46	10	2	1
2. University of Missouri-Rolla	57:30:52	4	1	2
3. Waterloo University	62:00:18	23	5	3
4. Queens University	62:55:11	13	14	4
5. Kansas State	65:22:55	16	9	5
6. University of Minnesota	66:59:20	22	17	6
7. Principia College	67:25:43	2	4	7
8. Rose-Hulman	69:17:30	1	3	8
9. University of Arizona	69:56:32	7	8	10
10. MIT	71:41:55	28	10	9
11. University of MO-Columbia	72:28:49	8	7	11

Final Results (cont.)

		RANKING		
		<u>Start</u>	<u>Leg 2</u>	<u>Leg 3</u>
12. University of Toronto	79:05:57	5	6	12
13. Messiah College	80:22:37	24	13	13
14. South Bank University (UK)	80:44:47	26	11	14
15. Stanford #16	90:56:16	3	12	15
16. Iowa State	92:39:00	19	26	16
17. FUTURA (Italy)	95:49:13	21	21	17
18. Stanford #91	99:53:07	20	27	18
19. Minnesota State	103:55:00	18	18	19
20. ETS (Canada)	106:00:57	6	15	20
21. North Dakota State	115:09:17	14	19	21
22. Los Altos High School	121:41:50	25	20	22

Final Results (cont.)

		RANKING		
		<u>Start</u>	<u>Leg 2</u>	<u>Leg 3</u>
23. Western Michigan	125:08:49	9	22	23
24. University of North Dakota	127:17:35	15	24	26
25. University of Virginia	128:03:07	11	16	24
26. Northwestern University	130:04:09	17	25	25
27. Texas A&M	130:31:11	12	23	27
28. Alberta	138:50:32	27	28	28
29. McMaster University	Withdrew			
30. University of Pennsylvania	Disqualified (unable to finish qualifier or 1st. Leg)			
31. Newburgh Free Academy	Disqualified (did not pass scrutineering)			



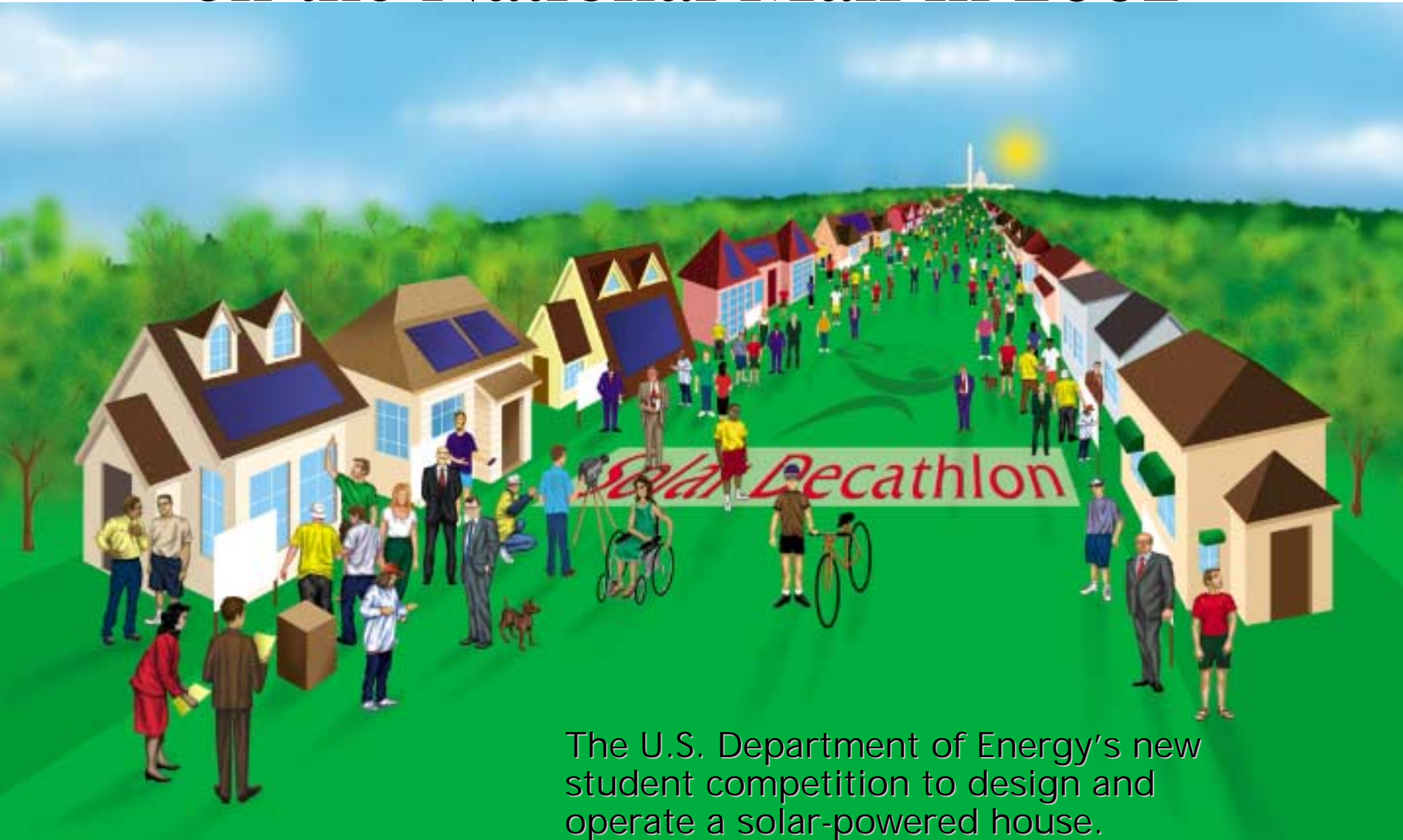




Solar Decathlon

The U.S. Department of Energy's new student competition to design and operate a solar-powered house.

The Solar Decathlon will be held on the National Mall in 2002



The U.S. Department of Energy's new student competition to design and operate a solar-powered house.



About the Solar Decathlon

- Demonstrates that the sun can provide the energy for an entire household, a home-based business, and the transportation requirements of both the household and the business.
- Challenges engineering and architecture students to collaborate and compete in view of a national audience.
- Fourteen selected teams design, build, and transport their competition homes to Washington, DC.
- One week of ten contests.

The Ten Solar Decathlon Contests

1. **Design and Livability:** Design, innovation, and aesthetics, to be judged by a jury of renowned architects.
2. **Design Presentation and Simulation:** Document construction of the house and the simulation of performance.
3. **The Comfort Zone:** Maintain the interior comfort efficiently.
4. **Refrigeration:** Maintain a refrigerator and freezer while minimizing energy use.
5. **Hot Water:** Provide hot water for common household uses.
6. **Energy Balance:** Begin and end the competition with the same amount of energy stored in the battery system.
7. **Lighting:** Elegance, quality, and energy efficiency of the lighting.
8. **Home Business:** Provide energy to power a small business operated from the home.
9. **Getting Around:** Transport “Solar Decathletes” around town in an electric vehicle.
10. **Graphics and Communication:** Web site, newsletters, and other outreach materials, as well as house tours for the visiting public.

About the Solar Decathlon Contests

Contest criteria include:

- Design aesthetics
- Energy efficiency
- Innovation
- Performance
- Public outreach

Winning teams will have a diversity of abilities:

- Architecture and Engineering
- Marketing and Communications
- Analysis and Computer Science

Solar Decathlon Teams

Auburn University

Carnegie Mellon University

Crowder College

Texas A&M University

The University of Delaware

The University of North Carolina at Charlotte

The University of Texas at Austin

Tuskegee University

University of Colorado at Boulder

University of Maryland

University of Missouri – Rolla

University of Puerto Rico – Mayaguez

University of Virginia

Virginia Polytechnic Institute and State University

Sponsors and Organizers

- The U.S. Department of Energy (DOE) is the primary sponsor of the Solar Decathlon.
- The National Renewable Energy Laboratory (NREL) is the organizer of the Solar Decathlon on behalf of DOE.
- BP Solar is DOE's principal corporate partner and co-sponsor of the Solar Decathlon.
- The American Institute of Architects (AIA) is contributing design guidance to the Solar Decathlon.



For more information, visit our website at: www.solardecathlon.org



Energy Efficiency and Renewable Energy Network (EREN) ☐ U.S. Department of Energy

S O L A R



DECATHLON

Features

- [Request for Proposals](#)
- [Contest Rules & Regulations](#)
- [Questions & Answers about the contest rules](#)

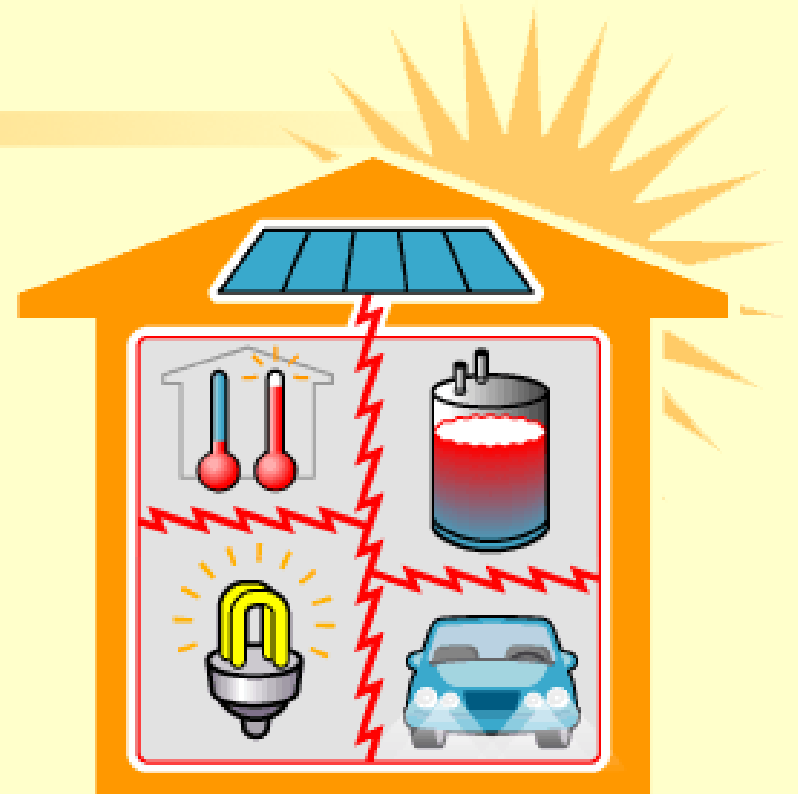
**Proposals are due
February 20, 2001.**

Energy We Can Live With

About
the Solar
Decathlon

Be a
Solar
Decathlete

Support
the Solar
Decathlon



A student competition to power our homes
and work with clean energy.

The Solar Decathlon



Energy We Can Live With